## November 1, 2001

Asadul H. Chowdhury Manager, Mining, Geotechnical, and Facility Engineering Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road P.O. Drawer 28510 San Antonio Texas 78228-5166

SUBJECT: REPOSITORY DESIGN AND THERMAL-MECHANICAL EFFECTS KEY

TECHNICAL ISSUE INTERMEDIATE MILESTONE NO.20-01402.671.170:

LETTER REPORT

Dear Dr. Chowdhury,

We have reviewed the Center's Letter Report entitled: "Software Reliability Analysis and Repository Preclosure Safety -- An Initial Survey," dated September 27, 2001. The report presents an initial survey of some basic concepts of software reliability, methodologies of software reliability analysis, and available guidance developed by the Nuclear Regulatory Commission. This background information is expected to be useful in the review of Department of Energy's preclosure safety analysis (PCSA) of the proposed geologic repository operations area at the Yucca Mountain site. At this time, we do not have any comments on the subject report. However, we would recommend that the author of this report, Dr Norman Eisenberg, be requested to meet with the staff and make a presentation to the Yucca Mountain Team in the near future. Based on the interaction with the author, we may ask for clarifications or provide comments if appropriate.

If you have any questions regarding this letter, you may contact me at (301) 415-6695 or via e-mail (msn1@nrc.gov). No written response to this letter is required and the subject report is considered to fulfill the Center's contractual obligations for this Intermediate Milestone. If there are comments from other staff reviewers on this report, or any recommendations for future work by other reviewers, I will forward them to you as and when they become available.

Sincerely,

/RA/

Mysore Nataraja, Program Element Manager Asadul H. Chowdhury Manager, Mining, Geotechnical, and Facility Engineering Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road P.O. Drawer 28510 San Antonio Texas 78228-5166

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Mysore Nataraja, Program Element Manager

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